REMARKS

Claims 1-26 were pending in this application.

Claims 1-26 have been rejected.

Claim 25 has been amended to correct a typographical error as shown above.

Claims 1-26 remain pending in this application.

Reconsideration and full allowance of Claims 1-26 are respectfully requested.

I. REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 1-26 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,275,712 to *Gray et al.* ("Gray") in view of U.S. Patent No. 5,940,742 to *Dent* ("Dent"). This rejection is respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. (*MPEP § 2142; In re Fritch, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992)*). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. (*MPEP § 2142; In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984)*). Only when a *prima facie* case of obviousness is established does the burden shift to the Applicant to produce evidence of nonobviousness. (*MPEP § 2142; In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993)*). If the Patent Office does not produce a *prima facie* case of unpatentability,

then without more the Applicant is entitled to grant of a patent. (*In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Grabiak, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985)*).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. (*In re Bell, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993)*). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on the Applicant's disclosure. (*MPEP § 2142*).

Gray describes a mobile station that uses multiple control states in which the mobile station can have varying physical and logical channel configurations assigned to it, depending on the present data transmission situation. In a CDMA2000 system, each of the control states requires the mobile station to expend a certain amount of power that depends on the type of channels assigned in that state and the time spent in that state. QoS requirements may be used to determine the time period for transitioning between control states and to determine which states are allowable for a mobile station. By defining the time periods and allowable states in a particular way, a mobile station may have faster access to channel resources and less delay in its

packet application to satisfy certain QoS requirements while minimizing power consumption and freeing up system resources. The defined time periods are controlled by timers. Gray proposes that these timers can be adjusted according to the power state of the mobile station in order to control the transitioning of the mobile station between various control states.

It is important to note that Gray does not teach that the "timers" are physical timers, but rather teaches that they are merely "timer period durations" monitored and controlled by software in control processor 222. For example, col. 6, lines 4-6 teaches that "control processor 222 will modify Tactive and Thold timer period durations and generate the appropriate commands." Control processor 222, and the Tactive and Thold "timers" it maintains, are a part of base station 200. Gray does not teach or suggest that the mobile station has any timer at all. Base station 200 is not disclosed as having any "control states" or "low power modes" at all.

Gray teaches that the mobile station can operate in multiple CDMA2000 control states, and that these can have various power requirements. Control states mentioned include an active state, in which dedicated forward and reverse control and traffic channels are each maintained, a control hold state, in which only a dedicated forward control channel is maintained, and a suspended state, in which all dedicated channels are released and the mobile station monitors only the forward common control channel. While these states have varying power requirements, none are disclosed as being "low-power modes" as claimed. Note also that in every disclosed control state, at least one channel is actively monitored.

Claim 1 requires, among other limitations, a "radio frequency (RF) transceiver comprising ... a power-saving apparatus capable of determining that said baseband section is

idle and, in response to said determination, placing the RF transceiver in a first of a plurality of low-power modes by reducing a power supply voltage providing power to said baseband section; wherein the power-saving apparatus comprises a timer, and wherein only the timer is capable of receiving power when the RF transceiver is in another of the low-power modes."

Gray's base station 200 cannot function as the claimed RF transceiver, for although it does maintain two "timers" Tactive and Thold, it does not include anything like a power-saving apparatus capable of determining that its baseband section is idle. Base station 200 has no means for placing the RF transceiver in a first of a plurality of low-power modes, for it is not described has having any low-power modes at all. Finally, nothing in Gray teaches or suggests that the base station 200 can reduce a power supply voltage providing power to its baseband section.

Similarly, Gray's mobile station 100 cannot function as the claimed RF transceiver, since nothing in Gray teaches or suggests that MS 100 has any timers at all. Further, though MS 100 can operate in multiple control states, none of these are taught to be the claimed "low-power modes". Further, nothing in Gray teaches or suggests that the MS 100 reduce a power supply voltage providing power to its baseband section.

Finally, the teachings of Dent cannot be used in Gray's system. There are no timers in MS 100, so clearly the teaching that "only the timer is powered" is irrelevant, and BS 200 can't be put in such an unpowered state. Further, even if Dent's timer were combined with Gray to add a new timer element to Gray's mobile station, the clear teaching of Gray is that even in the "suspended" state, the mobile station monitors the forward common control channel, and so is not a mode in which only the timer is capable of receiving power, as claimed.

As can be seen, even if Gray and Dent could be properly combined – and they cannot – the resulting combination would not meet the plain limitations of claim 1. As such, claims 1-12 distinguish over all art of record and should be allowed.

Claim 13 describes a method including determining that the baseband section is idle; in response to the determination that the baseband section is idle, placing the RF transceiver in a first of a plurality of low-power modes by reducing a power supply voltage providing power to the baseband section; and in another of the low power modes, supplying power only to a timer in the radio frequency transceiver, wherein the timer is capable of selectively increasing the power provided to at least the receive path circuitry.

Neither Gray, nor Dent, nor any combination of them teaches or suggests placing the RF transceiver in a first of a plurality of low-power modes by reducing a power supply voltage providing power to the baseband section, or supplying power only to a timer in the radio frequency transceiver, wherein the timer is capable of selectively increasing the power provided to at least the receive path circuitry. As such, claims 13-24 distinguish over all art of record and should be allowed.

Claim 25 describes, among other limitations, a power-saving apparatus capable of: reducing power provided to the baseband circuitry in a first low-power mode; reducing power provided to the baseband circuitry and to one of the transmit path circuitry and the receive path circuitry in a second low-power mode; reducing power provided to the baseband circuitry, the transmit path circuitry, and the receive path circuitry in a third low-power mode; and wherein the power-saving apparatus comprises a timer, and wherein only the timer is capable of receiving

power when the RF transceiver is in the third low-power mode.

As described above, only Gray's MS 100 has multiple "control states", and these do not correspond to the specific low-power modes of claim 25. Gray's MS 100 has no timer. Gray's MS 100 cannot meet the limitations of claim 25. Gray's BS 200 maintains timers, but has no low-power modes at all. Dent's timer can't be used in Gray's MS 100.

As such, claims 25-26 distinguish over all art of record and should be allowed.

All rejections are traversed. Accordingly, the Applicants respectfully request withdrawal of the §103 rejection and full allowance of Claims 1-26.

II. CONCLUSION

The Applicants respectfully assert that all pending claims in this application are in condition for allowance and respectfully request full allowance of the claims.

SUMMARY

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.

The Commissioner is hereby authorized to charge any fees connected with this communication (including any extension of time fees) or credit any overpayment to Davis Munck Deposit Account No. 50-0208.

Respectfully submitted,

DAVIS MUNCK BUTRUS, P.C.

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William A. Munck
Registration No. 39,308

P.O. Drawer 800889
Dallas, Texas 75380
(972) 628-3600 (main number)
(972) 628-3616 (fax)
E-mail: *wmunck@davismunck.com*